

REMARKS

Applicant amends claims 1-7 to remove multiple dependencies and to conform to conventions of U.S. practice. Applicant also presents new claims 8-15 to claim additional aspects of the invention. Applicant amends the specification to conform to conventions of U.S. practice. No new matter is introduced by the foregoing amendments.

Now pending in this application are method claims 1-7 and 8-15, of which claims 1 and 8 are independent.

No additional fees are believed to be due in connection with the filing of this preliminary amendment. However, to the extent that additional fees are due, or if a refund is forthcoming, please adjust our deposit account 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the specification:

Paragraph beginning at page 1, line 1 delete the following:

[Description]

In the claims:

Claims 1 through 7 have been amended as follows:

1. **(Amended)** A method for improving thermal process steps in the patterning of semiconductor wafers, in particular in rapid thermal processing (RTP) processes preferably during AA oxidation, sacrificial oxidation and GC sidewall oxidation, in which the wafer, in a process chamber, is heated to the process temperature at a predetermined heating rate and, after the envisaged process time has elapsed, is cooled again at a predetermined cooling rate, ~~[characterized in that]~~ wherein the wafer is heated at a heating rate of approximately 12°C/sec up to a brief stabilization step at constant temperature and then up to the envisaged process temperature at a heating rate of 10°C/sec and, after the process time has elapsed, is cooled down to room temperature again at a predetermined low cooling rate.
2. **(Amended)** The method as claimed in claim 1, ~~[characterized in that]~~ wherein the stabilization step is raised to a temperature of 120°C below the process temperature.
3. **(Amended)** The method as claimed in claim 2, ~~[characterized in that]~~ wherein the temperature of the stabilization step is 1000°C.
4. **(Amended)** The method as claimed in ~~[claims 1 to 3]~~ claim 1, ~~[characterized in that]~~ wherein the wafer is cooled at a cooling rate of approximately 20°C/sec.
5. **(Amended)** The method as claimed in claim 4, ~~[characterized in that]~~ wherein the wafer, at least in the temperature range in which wafer distortions can occur, is cooled at the cooling rate of approximately 20°C/sec from the process temperature to 120° below the process temperature and is then cooled at a lower cooling rate.

6. (Amended) The method as claimed in claim 1 [~~claims 1 to 5, characterized in that the~~
wherein a flushing step at the start of the recipe is shortened to an extent such that the
process chamber is sufficiently flushed with process gas.
7. (Amended) The method as claimed in claim 1 [~~claims 1 to 6, characterized in that~~
wherein the cooling step at the end of the recipe is set in such a way that the exit
temperature from the process chamber is 600°C.